



NAFFCO PSV-C-HC-100

SPRAY-APPLIED FIRE RESISTIVE MATERIAL FOR STEEL STRUCTURE

TECHNICAL DATA SHEET

- **Water-based.**
- **Exterior Application.**
- **Suitable for Hydrocarbon (Oil & Gas) Industry.**
- ANSI/UL 263 & UL 1709 (ASTM E119).
- D997, N872, Y741, Y743, Y744 and XR745.
(Refer to the UL certificate for minimum required thickness)
- Fire resistance rating: R15 - R180.



PRODUCT TYPE - CEMENTITIOUS PAINT

NAFFCO PSV-C-HC-100 based on cement, vermiculite and special high chemical resistant fibre, and contains no asbestos. It is used on exterior and interior steel structures of the building. It has rigid and tough characteristics. It resists rapidly rising temperature and polluted environment, and has the best fire resistive coating for petrochemical plants and general industrial equipments. NAFFCO PSV-C-HC-100 provides fire rating up to 3 hours.

PHYSICAL PROPERTIES DATA

1.	Colour (after curing)	:	Greyish white
2.	Dry Density (ASTM E605)	:	30/33 PCF (Min. Ind./Avg.)
3.	Hardness (ASTM D2240)	:	Shore D Min. 45
4.	Compressive Strength (ASTM E761)	:	Min. Avg. 40,000 PSF
5.	Cohesion/Adhesion (ASTM E736)	:	Min. Avg. 4,000 PSF
6.	Deflection (ASTM E759)	:	Pass
7.	Impact Resistance (ASTM E760)	:	Pass
8.	Anti-Corrosion (ASTM E937)	:	0.00 gm/mm ²
9.	Air Erosion (ASTM E859)	:	0.000 gm/ft ²
10.	Flame Spread (ASTM E84)	:	0 (over-coating of 1 coat of Clear Paint still be zero)
11.	Smoke Development (ASTM E84)	:	0 (over-coating of 1 coat of Clear Paint still be zero)
12.	Combustion Characteristic (ASTM E136)	:	Non Combustible
13.	Heat Conductivity (JIS A 1412)	:	0.147 Kcal/mhoC at Avg. 25.4°C
14.	Sound Absorption (ASTM C423)	:	NRC = 0.60 at 25 mm
15.	No Sagging (One Coat)	:	> 15 mm each coat (Normal Operation)
16.	pH Value (Stir with water)	:	Around 12
17.	Packaging	:	20 kg per bag
18.	Application Method	:	Spray or Manual Trowel
19.	Appropriate Substrates	:	Steel or Concrete
20.	Curing Time (20°C/50% RH)	:	Rough Dry : 2~6 hrs. Reach 50 % Strength : 5~7 days Reach 70 % Strength : 10~12 days Reach 98 % Strength : > 28 days

NOTE: NAFFCO reserves the right to change the content without notice.

21. Shelf Life (Normal Environment) : At least one year

CHARACTERISTIC

1. EXCELLENT PHYSICAL PROPERTIES

Excellent compact, compression and bend resistance to suffer hard hits without flaking because of containing the anti-crack textile fibre. It even has fairish physical property. It can bear up to 3 hours of burning without chalking or softening to bear convective wind of fire scene and guaranteed its fire resistive strength.

2. VERY GOOD WEATHER RESISTANCE

NAFFCO PSV-C-HC-100 contains special ingredients of high chemical resistance. It can be exposed in exterior polluted environment for a long term, but still keeps its high physical properties and fire resistive performance. NAFFCO PSV-C-HC-100 passed the simulative test of atmospheric environment such as aging, high humidity, industrial air pollution, salt moisture and combined wet/ice/dry cycle etc. for exterior done by the Underwriters Laboratories Inc. according to UL 263 & UL 1709.

3. NO ASBESTOS CONTENT

The product is completely excluded of any asbestos ingredient which was conducted by the Building Performance Institute Experimental Group, Ministry of the Interior. The smoking quantity is zero tested by the American Underwriters Laboratories Inc. according to ASTM E84 (UL723).

4. SELF CORROSIVE PREVENTION

The containing ingredient may inhibit the oxidation of iron and does not cause any corrosion phenomenon if in contact directly with steel.

5. EASY APPLICATION, LOW POLLUTION

Add water and stir well. NAFFCO PSV-C-HC-100 can be sprayed immediately. It has good flowing and moderate viscosity. The finish can be applied with various protective and decorative coatings (Optional). The decorative coating may not only increase the colourful appearance but also protect the coating to avoid directly contacting with air pollution which helps extend the warranty period of the product..

6. BEST QUALITY, STABLE SUPPLY

The product is certified by Germany TUV CERTIFIED DIN EN ISO 9001:2008 and has joined Follow-up Server of American Underwriters Laboratories Inc. The Annual production of up to 1 million bags are done by using automatic equipments. The quality and supply of NAFFCO PSV-C-HC-100 is comparatively better than other cementitious products.

7. FIRE TESTING CERTIFICATION

- (1)** NAFFCO PSV-C-HC 100 is American U.L. Certified according to UL 263 & 1709 and registered in American Underwriters Laboratories Inc. annual issue fire protection dictionary, Design No. D997, N872, Y741, Y743, Y744 and XR745.

APPLICATION OF PAINT

Because the fire resistive coating belongs to porous material, it can also be exposed in an open environment for a long term.

(Note 1) - The lowest environmental and substrate surface temperature must be above 4°C, such temperatures should be exceeded 24 hours before and after the application of NAFFCO PSV-C-HC-100.

(Note 2) - The lowest environmental and substrate surface temperature must be below 50°C for NAFFCO PSV-C-HC-100.

(Note 3) - The temperature of substrate must be minimum 2°C above dew point temperature.

FIRE PROTECTION COATINGS & MATERIALS SECTION
PASSIVE FIRE (PF) DIVISION, R&D DEPARTMENT
NAFFCO Flow Control.

In case of any questions please contact our technical support team.
For full product documentation and other information please visit our website www.naffco.com

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In line with NAFFCO policy for continuous product development, NAFFCO has the right to change specifications without prior notice.